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Tribal Food Sovereignty in the American Southwest

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TRIBAL FOOD SOVEREIGNTY IN THE AMERICAN SOUTHWEST

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ABSTRACT

Food is an issue that implicates tribal sovereignty for historical, cultural, and public health reasons. This article undertakes a policy analysis of the importance of food to tribal sovereignty, and suggests that tribes, many of which have begun to do so already, make robust use of the concept of "food sovereignty" as part of their overarching project of protecting and promoting tribal sovereignty in general. This article sets the stage for understanding the importance of food sovereignty to tribes by exploring the history of food and culture in the American Southwest, where the public

health consequences of changes in diet have been particularly devastating.

I. INTRODUCTION: AMERICAN INDIAN CONCEPTIONS OF LAND, FOOD, AND IDENTITY

[The Creator] made the Earth and he made the sky and he placed them there, and he tied them together and placed them there. At one point the Earth was not tame, it was wild; and so he made the spider and he made ropes, with it he tied them together securely, the Earth and the sky, and so the Earth was now tame. And upon the Earth he made the living things to stand upon it, and to them he gave a conscience, thought, and he gave them a way of life. And upon it he made 'u:ske:kag, living plants, trees, and he gave it thought and he gave it a way of life. And upon it he made 'u'uwhig da'adam', the birds that fly, and he gave them thought, and he gave them a way of life. And upon it he made 'jewedo memedadam, the ones that run on the ground, and he gave them thought, and he gave them a way of life. And so there are many things that were made. There are many things that were made on the Earth, and if you are interested in hearing it all, there are many things to be said, that is what we were told. And so it happened when the Milga:n [Anglo-American] came, he put us in schools, and from then on it has felt as if we are not free. We feel as if we are not free in the sense that we are not the same way we were back when the Earth was first put here. Back when the land that was of the O'odham, belonged to the O'odham, when it was all desert.[1]

There are many fundamental changes that European contact, Spanish settlement, and subsequent Anglo-American encroachment brought to the

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1. FRANCES MANUEL & DEBORAH NEFF, DESERT INDIAN WOMAN: STORIES AND DREAMS xxxi-xxxii (2001) (Milga:n is translated in this book as "Americans," but I have added the preface Anglo- here to clarify the meaning in context).

lives of the American Indian people of the Southwest.[2] One of the most devastating of these changes has been a forced shift in the way American Indian tribes use and relate to the land on which they reside.[3] Federal assimilation and allotment[4] policies confined tribes to smaller and smaller portions of their traditional territories, or relocated tribes altogether.[5] The fundamental changes in lifestyle that resulted are deeply at odds with traditional American Indian notions of the relationship between land, food, and identity, and have had devastating social and physical health impacts for native communities.[6]

In many American Indian cultures, "[l]andscapes and people cannot be separated; one entails the other. . . . The processes through which cultural landscapes are created and maintained are part and parcel of the processes by which culture instills values, beliefs, and historical memory in people belonging to a community."[7] This deep connection to the land-as-culture brings with it a deep connection to the food produced by traditional lands.[8] Loss of traditional food sources along with traditional land bases is therefore more damaging than Euro-American understanding of food and culture can likely conceive.[9] This article will present research and findings largely based on Euro-American measures of health and land use. It must be acknowledged, however, that although modern research has begun to consider concepts such as "historical trauma,"[10] and to integrate the voices

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2. *Id.* at 109.

3. *Id.* at xxxii-xxxiii.

4. With the General Allotment or Dawes Act of 1887, the United States Federal Government officially implemented a policy of dividing and distributing previously communally held tribal lands to individual tribal members, and then selling "excess" lands to American settlers. This policy continued until the passage of the Indian Reorganization Act of 1934, resulting in a staggering loss of tribal land base. See section III(A) for more on the U.S. allotment policy. *See* KRISTIN C. RUPPEL, UNEARTHING INDIAN LAND: LIVING WITH THE LEGACIES OF ALLOTMENT 30-31 (2008).

5. *See Id.*

6. "Environmental degradation resulting from pollution, poverty, and bio-social epidemiology such as diabetes, alcoholism, physical abuse, and high rates of suicide are all related symptoms of 'ethno-stress' caused by the disruption of culture and loss of land base among Indigenous peoples." Gregory Cajete, *Introduction* to A PEOPLE'S ECOLOGY: EXPLORATIONS IN SUSTAINABLE LIVING vii (1999).

7. T.J. FERGUSON & CHIP COLWELL-CHANTHAPHONH, HISTORY IS IN THE LAND 31 (2006).

8. *Id.* at 114.

9. *Id.* at 111.

10. "Historical trauma and grief are sometimes cited as factors impacting psychological and physical health and contributing to the health disparities between [American Indians, Alaska Natives,] and other groups. [Research] indicates that historical trauma has a layering effect and defines the concept as the collective emotional and psychological injury both over the life span and across generations resulting from

of American Indians and other minority groups into academic and scientific research models, there is generally a fundamental rift in the collection and analysis of data through these models and American Indian cultural understanding.

This article will argue that traditional foods must be thought of as an important tool in healing the physical and emotional damage that a largely commodity foods-based diet has done to American Indians of the Southwest, and that by engaging in "food sovereignty," tribal communities can strengthen their de facto sovereignty as tribal nations. In order to lay the backdrop, this article will first explore the history of American Indian presence and agriculture in the American Southwest. The second section will then provide a summary of the effects of assimilationist policies broadly implemented in the United States regarding tribal relationships to land, as well as their specific effects on the tribes of the Southwest. In the third section, subsequent impacts on American Indian health caused by the fundamental shift in diet brought by reservation life and federal food aid programs will be explored. In the fourth section, this article will discuss the state of modern tribal agriculture in the Southwest. This article will conclude by emphasizing the importance of food sovereignty in the pursuit of cultural healing, and the strengthening of tribal sovereignty and culture generally.

The concept of "food sovereignty" was first developed in the international dialogue about food security, and "refers to the 'rights of people to define how they will hunt, grow, gather, sell, or give away their food with respect to their own cultures and own systems of management of natural resources.'"[11]

> The rising incidence of health problems, such as late onset diabetes, heart disease, and other dietary and lifestyle illnesses as well as the compounded challenge to food sovereignty, which the growing hegemony of the global food system represents, has provided a new focus for activism and action for First

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the history of difficulties that Native Americans as a group have experienced in America (Steinman, 2005). These experiences are not 'historical' in the sense that they are in the past and a new life has begun in a new land. Rather, the losses are ever present, represented by the economic conditions of reservation life, discrimination, and a sense of cultural loss (Whitbeck et al, 2004)." U.S. DEP'T OF HEALTH & HUMAN SERVS., OBESITY AND AMERICAN INDIANS/ALASKA NATIVES 31 (2007), *available at* http://aspe.hhs.gov/hsp/07/ai-an-obesity/report.pdf.

11. MICHÈLE COMPANION, INT'L RELIEF & DEV., AN OVERVIEW OF THE STATE OF NATIVE AMERICAN HEALTH: CHALLENGES AND OPPORTUNITIES 4, 27-28 (April 2008).

> Peoples. For many, rebuilding food security and food sovereignty through the revival of traditional food systems is a vital step in rebuilding individual and community health and overcoming the most negative socio-cultural impacts of colonialism.[12]

American Indian communities are possessed of a unique legal and political status in the United States, and in modern times are able to exercise self-determination in ways consistent with the goals of food sovereignty.[13] The practice of community-based food sovereignty is one of the tools available to tribes to combat colonial and assimilationist policies that have so devastated tribal health, land, culture, and use of native foods.[14]

II. AGRICULTURAL PRACTICES IN THE AMERICAN SOUTHWEST PRIOR TO EUROPEAN CONTACT

This section will first describe American Indian histories of tribal presence on ancestral homelands in the Southwest, and their importance for contextualizing archaeological understandings of the origins of people in the Americas, and a subsequent discussion of food, culture, and sovereignty. The second part of this section will explore the archaeological history[15] of American Indian occupation of the Southwest, and will discuss the "disappearance" of the Ancient Puebloan[16] and Fremont peoples from traditionally occupied regions and their absorption into modern tribes. The third part of this section will explore historical evidence of the development of agriculture, and the methods and crops used by American Indian agriculturalists in the Southwest prior to European contact.

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12. Nancy J. Turner & Katherine L. Turner, *Traditional Food Systems, Erosion and Renewal in Northwestern North America*, 6 INDIAN J. OF TRADITIONAL KNOWLEDGE 57, 58-59 (2007).

13. *Id.* at 65.

14. *Id.*

15. While archaeological understandings of ancient peoples and their migrations provide interesting information about land use and historical agriculture, they do not properly represent American Indian cultural knowledge of the landscape and their relationship to it.

16. I am electing to use the terminology "Ancient Puebloan" in favor of the term "Anasazi," which is in use by archaeologists but comes from a Navajo word meaning "ancient enemy." JOY HAKIM, THE FIRST AMERICANS 29 (2003).

A. Indigenous Teachings About the Origin of Peoples in the Southwest

> *The white ear of corn had been transformed into our most ancient male ancestor. And the yellow corn had been transformed into our most ancient female ancestor. It was the wind that had given them life: the very wind that gives us our breath as we go about our daily affairs here in the world we ourselves live in! When this wind ceases to blow inside of us, we become speechless. Then we die. In the skin at the tips of our fingers we can see the trail of that life-giving wind. Look carefully at your own fingertips. There you will see where the wind blew when it created your most ancient ancestors out of two ears of corn, it is said.*[17]

Tribal communities in the Southwest, like many tribal peoples throughout the Americas, tell origin stories that reveal an intimate connection between people and place.[18] Although some might consider tribal creation stories as separate from and incompatible with archeological evidence of early human presence in the American Southwest, these stories provide invaluable perspectives on cultural understandings of the importance of place and sustenance to cultural knowledge and identity. Furthermore, the knowledge that tribal origin stories impart about the presence and history of people and place should, and increasingly do, inform historical accounts of American Indian peoples.[19]

Many of the origin stories of the Navajo, Tohono O'odham, and Pueblo peoples center on rain, wind, and living in the right way; the peoples' relationship to food, plants, and animals also feature prominently.[20]Although these stories often take place in a time that does not entirely resemble the

17. PAUL G. ZOLBROD, DINÉ BAHANÉ: THE NAVAJO CREATION STORY 50-51 (1984).

18. *Id.* at 21-22.

19. *See, e.g.*, AnCita Benally & Peter Iverson, *Finding History*, 36 W. HIST. Q. 353 (2005).

20. Three sources for traditional Navajo, Tohono O'odham, and Pueblo stories are: ZOLBROD, *supra* note 18, at 7 (a version of the Navajo Creation Story); AMERICAN INDIAN MYTHS AND LEGENDS (Richard Erodes & Alfonso Ortiz, eds., 1984); VOICES OF THE AMERICAN INDIAN EXPERIENCE, VOLUME I: CREATION – 1877 (James E. Seelye, Jr. & Steven A. Littleton, eds., 2013). Two other interesting sources that tell life-stories of tribal elders and include various traditional stories are: MANUEL & NEFF, *supra* note 1, at xxxv (the story of a Tohono O'odham woman's life); EVA TULENE WATT & KEITH H. BASSO, DON'T LET THE SUN STEP OVER YOU: A WHITE MOUNTAIN APACHE LIFE, 1860-1975 (2004). Additionally, A PEOPLE'S ECOLOGY: EXPLORATIONS IN SUSTAINABLE LIVING (Gregory Cajete, ed., 1999) conveys some traditional Pueblo stories related to food and what the editor terms "theology of place."

present, they are nonetheless understood to impart vital knowledge about how to live presently in the world.[21] Dudley Patterson, an Apache elder working with ethnologist Keith Basso, explained this concept with a simple phrase: "Wisdom sits in places."[22] Wisdom, in the Western Apache worldview, is something that requires an intimate knowledge of history and place—a deeply spatial as well as intellectual understanding of the Apache homeland and culture.[23] This intimate and ongoing relationship to place is evident in the work of many modern American Indian authors.[24] Simon

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21. "The Americas are an ensouled and enchanted geography, and the relationship of Indian people to this geography embodies a 'theology of place' . . . The land has become an extension of Indian thought and being because, in the words of a Pueblo elder, 'It is this place that holds our memories and the bones of our people . . . This is the place that made us.'" Gregory Cajete, *"Look to the Mountain": Reflections on Indigenous Ecology, in* A PEOPLE'S ECOLOGY: EXPLORATIONS IN SUSTAINABLE LIVING 3 (Gregory Cajete, ed., 1999).

22. KEITH H. BASSO, WISDOM SITS IN PLACES: LANDSCAPE AND LANGUAGE AMONG THE WESTERN APACHE 122 (1996).

23. "Stated in general terms, the Apache theory holds that 'wisdom' – *'igoyá'í* – consists in a heightened mental capacity that facilitates the avoidance of harmful events by detecting threatening circumstances when none are apparent. This capacity for prescient thinking is produced and sustained by three mental conditions, described in Apache as *bíni' godilkooh* (smoothness of mind), *bíni' gontl'iz* (resilience of mind), and *bíni' gonldzil* (steadiness of mind). Because none of these conditions are given at birth, each must be cultivated in a conscientious manner by acquiring relevant bodies of knowledge and applying them critically to the workings of one's mind. Knowledge of places and their cultural significance is crucial in this regard because it illustrates with numerous examples of the mental conditions needed for wisdom as well as the practical advantages hat wisdom confers on persons who possess it. Contained in stories attributed to the ancestors, knowledge of places thus embodies an unformalized model of *'igoyá'í* and an authoritative rationale for seeking to attain it." *Id.* at 130-31.

24. Three Southwestern American Indian authors of note are Leslie Marmon Silko (Laguna Pueblo), Ofelia Zepeda (Tohono O'odham), and Simon J. Ortiz (Acoma Pueblo). Silko is a novelist, and her 1999 book GARDEN IN THE DUNES is a luscious story about Indian and non-Indian relationships to food, family, culture, and place. *See* LESLIE MARMON SILKO, GARDENS IN THE DUNES (1999). Ofelia Zepeda is a poet, and two of her collections, OCEAN POWER: POEMS FROM THE DESERT (1995) and WHERE CLOUDS ARE FORMED (2008), are meditations on wind, rain, and life in the desert that reflect her deep and historical connection to the O'odham homeland. *See* OFELIA ZEPEDA, OCEAN POWER: POEMS FROM THE DESERT (1995); OFELIA ZEPEDA, WHERE CLOUDS ARE FORMED (2008). Two other wonderful collections of southwestern native writings and images are: HOME PLACES: CONTEMPORARY NATIVE AMERICAN WRITING FROM SUN TRACKS (LARRY EVERS & OFELIA ZEPEDA, EDS., 1995); and THE PUEBLO IMAGINATION: LANDSCAPE AND MEMORY IN THE PHOTOGRAPHY OF LEE MARMON (2003), which includes writings by Leslie Marmon Silko, Joy Harjo (Muskojee Creek), and Simon Ortiz.

Ortiz, author and poet from the Acoma Pueblo in New Mexico, is one such author.[25] He writes:

The rivers
run from the sky.
Stone soothes
every ache.
Dirt feeds us.
Spirit is nutrition.[26]

These indigenous understandings of the ways in which the land sustains and defines the people who belong to it are vital preface to the following section, which provides a summary of the archeological evidence of the long history of agricultural societies in the American Southwest.[27] Only tribal perspectives, as far as tribal peoples are willing to share them, can provide the context that can begin to illuminate for others the significance of food sovereignty for tribal communities.

B. Archeological Evidence of the Ancient Occupants of the American Southwest

Archaeological exploration of the Southwest is ongoing, and though estimates vary, there is evidence that humans occupied the region beginning more than 20,000 years ago.[28] In 1927, archaeologist Alfred V. Kidder

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25. *See Simon J. Ortiz*, POETRY FOUNDATION, http://www.poetryfoundation.org/bio/simon-j-ortiz (last visited Oct 15, 2014) (Ortiz is professor of literature and a widely renowned poet, and has also authored short stories and children's books).

26. SIMON J. ORTIZ, FROM SAND CREEK 79 (1981).

27. As Stephen H. Lekson artfully explains: "It would be easy to dismiss the historical content of origin stories as 'myth,' but that would be more than simply patronizing; even from the most Eurocentric view, it would be wrong. . . The historic speaks directly to the Western window on the Pueblo past: science and, specifically, archeology. Archaeology cannot and should not 'confirm' origin stories, any more than any body of traditional knowledge can 'confirm' scientific study. The two views are based on incompatible logics and serve entirely different purposes. Origin stories explain, very specifically, how the Pueblo world came to be and how Pueblo people ought to behave within it. Archaeology is one of many noodling paths of insatiable Western curiosity and, insofar as it has a delimitable purpose, it seeks to know the Southwest as yet an element in the much larger global scheme of humanity. These are very different goals." Stephen H. Lekson, *Ruins of the Four Corners, Villages of the Rio Grande*, *in* ANCIENT LAND, ANCESTRAL PLACES 7 (1993).

28. STEVEN SIMMS, ANCIENT PEOPLES OF THE GREAT BASIN & COLORADO PLATEAU 106 (2008).

developed a chronology of Ancient Puebloan history known as the "Pecos Classification," the basic framework of which is still in use by archaeologists today.[29]

Archaeological evidence of domesticated plants appears sometime between 2100 B.C.E. and 1000 B.C.E.,[30] coinciding approximately with the Pecos Classification's Southwestern Late Archaic or Basketmaker I period, which begins in 1500 B.C.E.[31] By the time the Basketmaker II period began in 200 C.E., agricultural crops such as corn, beans, and squash were a larger part of people's diet.[32] During the Basketmaker II time period, the population was largely concentrated in the San Juan watershed, but by the time the Basketmaker III period began in 500 C.E., development had shifted to higher elevations.[33]

During the Pueblo I (800-900 C.E.) and Early Pueblo II (900-1000 C.E.) periods, Ancient Puebloan settlements began to expand throughout the Southwest, and into the more northern reaches of the Four Corners region.[34] This expansion coincided with years of minimal, unpredictable precipitation, which archaeologists theorize indicates: "the period may have been one of experimentation for agriculturalists trying to find reliably productive locations despite poor and variable climate."[35] During Pueblo II, the Ancient Puebloans became increasingly "provincial," as rainfall and conditions for agriculture improved.[36] As Pueblo III began in the early 1100s C.E., however, rainfall again decreased and although agriculture continued, some of the more marginal sites were abandoned.[37]

At the end of the Pueblo III period, a major shift in Ancient Puebloan lifestyle appears to have occurred. Throughout Ancient Puebloan occupation of the Southwest, migration patterns are evident, but by 1300 C.E. much of

29. LINDA S. CORDELL, ARCHAEOLOGY OF THE SOUTHWEST 164-67 (2009).

30. Robert J. Hard & John R. Roney, *Late Archaic Period Hilltop Settlements in Northwestern Chihuahua, Mexico*, *in* IDENTITY, FEASTING, AND THE ARCHAEOLOGY OF THE GREATER SOUTHWEST: PROCEEDINGS OF THE 2002 SOUTHWEST SYMPOSIUM 276 (Barbara J. Mills ed., 2004); CORDELL, *supra* note 29, at 129.

31. CORDELL, *supra* note 29, at 129.

32. R. GWINN VIVIAN & BRUCE HILPERT, THE CHACO HANDBOOK: AN ENCYCLOPEDIC GUIDE 48 (2002).

33. KIRK BRYAN, *Pre-Columbian Agriculture in the Southwest, as Conditioned by Periods of Alluviation*, 31 ANNALS OF THE ASS'N OF AM. GEOGRAPHERS 219, 237-38 (1941).

34. CORDELL, *supra* note 29, at 280.

35. *Id.*

36. *Id.* at 285.

37. *Id.* at 193-94; 285.

the Four Corners region was abandoned by its previous occupants.[38] The reasons for this abandonment are the subject of debate among archaeologists, but what appears to have been a mass migration of Ancient Puebloan peoples seems to have coincided with a major drought.[39] Drought was not unknown to the Ancient Puebloan peoples, and evidence of water storage systems appear during Pueblo II time, but the "Great Drought" of the late 1200s C.E. may have over-taxed even those precautionary measures.[40]

The Fremont peoples, who resided alongside the Ancient Puebloans largely within the boundaries of modern-day Utah, seem to have come to the Southwest around 200 B.C.E.[41] Although hunting and gathering were the major sources of food for the Fremont people, by 500 C.E. they were engaged in some farming, and by 900 C.E. farming took hold as a nearly universal practice.[42] Like the Ancient Puebloans, Fremont peoples appear to have abandoned the Colorado Plateau by 1300 C.E., at which point hunter-gatherer peoples such as the Navajo and Apache appear to have moved into those areas previously occupied by the Fremont.[43] As with the Ancient Puebloans, Fremont peoples seem to have had a cultural pattern of periodic migration, likely precipitated here on a large scale by the Great Drought.[44]

Although the Ancient Puebloans and Fremont peoples abandoned large areas of the Southwest they formerly used for agriculture, the practice of agriculture in the region continued.[45] Many modern tribes of the Southwest descended from these earlier occupants and were still practicing agriculture at the time of European contact.[46]

C. Agricultural Practices in the Southwest prior to European Contact

In the language of the Hopi, "techaqua ikachi" is defined as a blending of the people with the land and

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38. *Ancestral Puebloans and Their World*, NAT'L PARK SERV., MESA VERDE NAT'L PARK, http://www.nps.gov/meve/forteachers/upload/ancestral_puebloans.pdf (last visited Apr. 11, 2015).

39. BRYAN, *supra* note 33, at 239.

40. Richard H. Wilshusen et al., *Prehistoric Reservoirs and Water Basin in the Mesa Verde Region: Intensification of Water Collection Strategies During the Great Pueblo Period*, 62 AM. ANTIQUITY 664, 666 (1997).

41. SIMMS, *supra* note 28, at 186-87.

42. *Id.*

43. *The Fremont Culture*, NAT'L PARK SERV., http://www.nps.gov/care/historyculture/upload/Fremont.pdf (last visited Apr. 11, 2015).

44. SIMMS, supra note 28, at 231-34.

45. *See generally* MICHAEL CADUTO & JOSEPH BRUCHAC, NATIVE AMERICAN GARDENING: STORIES, PROJECTS AND RECIPES FOR FAMILIES (1996).

46. *Id.* at 69.

> *celebrating life. . . For the Hopi, the blue corn is a "way of life" and is used in ceremonies. Hopi "lifeway" is a life based upon cooperation, respect, humility, and earth stewardship.*[47]

Approximately seven thousand years ago, the ancient peoples of Central America domesticated a wild grass called Teosinte, creating the first varieties of corn.[48] Along with this staple crop, these ancient societies domesticated beans, squash, peanuts, and tomatoes.[49] Archaeological evidence left some doubt about the true date of the northern introduction of corn and other crops, but is appears that the arrival of domesticated plants to the American Southwest occurred between 2100 and 1400 B.C.E.[50]

Beans, corn, and squash, the "three sisters," were staples of all of the ancient agricultural communities of the Southwest.[51] These crops supplemented the hunting and gathering practices of Ancient Puebloans and Fremont peoples, along with domesticated turkeys.[52] These ancient peoples and their modern descendants cultivated various local plants in addition to the three sisters for food purposes.[53] The rise of agriculture as a common practice in the Southwest seems to have coincided with the "Medieval Warm Period," which began in approximately 0 C.E.[54] The favorable farming conditions encouraged the formation of larger communities and general population growth in the region.[55] The Great Drought and the mass migrations of the late 13th Century C.E. correspond with the "Little Ice Age," which brought cooler temperatures and less predictable patterns of rainfall to the Southwest than during the Medieval Warm period.[56] Unpredictable

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47. Darla J. Mondou, *The American Indian Agricultural Resources Management Act: Does the Winters Water Bucket Have a Hole in It?*, 3 DRAKE J. AGRIC. L. 381, 405 (1998).

48. CADUTO & BRUCHAC, *supra* note 45, at 67.

49. *Id.* at 7.

50. Hard & Roney, *supra* note 30, at 276.

51. CADUTO & BRUCHAC, *supra* note 45, at 68-69.

52. *Ancestral Puebloans and Their World*, *supra* note 38; BRYAN, *supra* note 33, at 219.

53. Gary Paul Nabhan & Patrick Pynes, *Agricultural Diversity: Crop Genetic Resources, Agrohabitants, and the Farmlands-Wildland Mosaic on the Colorado Plateau*, *in* SAFEGUARDING THE UNIQUENESS OF THE COLORADO PLATEAU: AN ECOREGIONAL ASSESSMENT OF BIOCULTURAL DIVERSITY 59, 60-61 (The Center for Sustainable Environments, Northern Arizona University et al. eds., 2002), *available at* www.terralingna.org/wp-content/uploads/downloads/2011/01/Colorado-plateau.pdf.

54. SIMMS, *supra* note 28, at 88.

55. *Id.* at 231-34, 274.

56. *Id.* at 85.

rainfall not favorable to farming prevailed through the 1600s C.E.[57] Some farming continued among the peoples of the Southwest nonetheless, and has survived into modern times.[58]

Several of the modern tribes of the American Southwest appear to have descended directly from the Ancient Puebloans and Fremont peoples.[59] Hopi is one such tribe, whose cultural knowledge reflects ancient traditions of migration and agriculture.[60] Much of the traditional agricultural practice and knowledge still in use by Hopi peoples today is likely largely unchanged from the time of the Ancient Puebloans, and reflects a deep and unique connection to the land, and to the blue corn that remains the primary crop for the Hopi.[61] With such a deep and abiding connection to traditional land, agricultural practices, and food, there is little wonder that the damage done by the imposition of the Euro-American regime of reservations and notions of modern agriculture have caused extensive cultural and health-related damage to American Indian peoples of the Southwest.

III. EURO-AMERICAN POLICIES OF ASSIMILATION AND THEIR EFFECT ON THE TRIBAL RELATIONSHIP TO LAND

> *American Indians hold their lands – places – as having the highest possible meaning, and all their statements are made with this reference point in mind.*[62]

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57. *Id.*

58. *See generally id.*

59. *People of the Colorado Plateau*, *in* CANYONS, CULTURES AND ENVIRONMENTAL CHANGE: AN INTRODUCTION TO THE LAND-USE HISTORY OF THE COLORADO PLATEAU (John D. Grahame & Thomas D. Sisk eds., 2002), *available at* http://www.cpluhna.nau.edu/.

60. "When Máasaw gave Hopi the use of his land, he also gave them seeds, a gourd of water, and a digging stick with the admonishment that they strive to be humble farmers. It is not surprising, then, that Hopi migration traditions are replete with references to agriculture. It is often said that during their travels the ancestors of the Hopi would scout new locations where the soil and water conditions were favorable for growing crops. Migrating clans would then move to these locations and stay for several years to grow the food needed to continue their travels." FERGUSON & COLWELL-CHANTHAPHONH, *supra* note 7, at 110-11.

61. "The Hopi tribe's unique relationship with the land cannot be easily explained academically... The Hopi tribe exists in the 'fourth way of life,' a concept that is difficult to understand, and secretly guarded by the Hopi. When the 'fourth way of life' was emerging, the Hopi were offered corn by a member of their deity. Other 'peoples' took the largest ears of corn, and the Hopi got the remaining corn - a short ear of blue corn. The short 'blue ear' has profound significance to the Hopi." Mondou, *supra* note 47, at 405.

62. Vine Deloria, Jr, GOD IS RED 61 (2003).

This section of the paper will first outline colonial policies toward American Indians and their lands, which will lay a foundation for understanding the deep changes these policies have wrought to the traditional tribal relationship to land and food. In the second part of this section, the effects of these policies will be examined in the context of the American Southwest.

A. Reservations, Allotment, and General Policies of Assimilation: An Attack on the Native Land Base

Pursuant to colonial policies, the first United States Supreme Court recognized the existence of "Indian title" in all lands traditionally used by tribes, described as a right to exclusive use in *Johnson v. M'Intosh*.[63] This lesser form of property ownership was based on the idea that hunter-gatherers did not fully occupy their territory,[64] and disrupting the traditional food-ways of native peoples by clearing native forests for intensive agriculture was in part a policy aimed at controlling native peoples.[65] *Johnson* further adopted the colonial policy that vests the exclusive right to clear this title in the federal government as United States law.[66] In another early Supreme Court case, *Worcester v. Georgia*, the Court clarified the sovereign powers that tribes retain over land reserved through treaties with the federal government.[67] These sovereign powers reserved to the tribe the right to manage their internal affairs, which precludes state jurisdiction over Indian treaty lands.[68] This power over internal affairs, however, is limited by what the Supreme Court has termed Congress' "plenary authority over the tribal relations of the Indians," which includes the power to abrogate treaties with tribal nations.[69] Early American history of Indian affairs is replete with broken treaties.[70] When Andrew Jackson was elected President in 1828, he lobbied for and succeeded in implementing the passage of the Indian Removal Act of 1830, which authorized the federal government to remove

63. Johnson v. M'Intosh, 21 U.S. 543, 587, 592 (1823).

64. *See* Eric Kades, *History and Interpretation of the Great Case of Johnson v. M'Intosh*, 19 LAW & HIST. REV. 67, 72 (2001).

65. Eric Kades, *The Dark Side of Efficiency: Johnson v. M'Intosh and the Expropriation of American Indian Lands*, 148 U. PA. L. REV. 1065, 1149 (2000).

66. *See Johnson*, 21 U.S. at 543.

67. *See* Worcester v. Georgia, 31 U.S. 515 (1832).

68. *Id.*

69. Lone Wolf v. Hitchcock, 187 U.S. 553, 556 (1903).

70. *See generally* FRED A. SEATON & ELMER F. BENNETT, FEDERAL INDIAN LAW 201 (2008) (providing examples of such treaties).

all Indian tribes from the Eastern Seaboard to territories west of the Mississippi River.[71]

Most eastern tribes were relocated by 1851, when the Indian Appropriations Act allocated funds to move tribes onto the first reservations.[72] These reservations were considered vital to the alleged "civilization" of Indian tribes, which was to be accomplished by imposing European agricultural practices and notions of property on tribal members.[73]

> That Indians held their lands in common was an essential element of the reformers' story. According to that story, tribal societies were "communist," recognizing no private property rights in land. Indians, the story went, were crying out to be saved by the transformative power of private property. According to the reformers, civilization was impossible without the incentive to work that came only from individual ownership of a piece of property. Without the right to enjoy the exclusive fruits of their own labor on the land and to pass the improved land on to their heirs, Indians would have no incentive to abandon the chase and adopt the civilizing course of agriculture and home industry. As an agent to the Sioux put it in 1858, "the common field is the seat of barbarism; the separate farm the door to civilization."[74]

This story, of course, was false, ignoring the fact that tribes recognized private property rights in many forms, and some tribes relied on agriculture more heavily than others.[75] In the Southwest, several tribes, including the Pimas, Tohono O'Odham, Mohave, Hopi, and most of the Pueblo peoples, recognized forms of inheritable and perpetual private property rights for the

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71. Indian Removal Act of 1830, ch. 148, 4 Stat. 411

72. SEATON & BENNETT, *supra* note 70, at 201-03.

73. *See* ROBERT T. ANDERSON, BETHANY BERGER, PHILLIP P. FRICKEY, & SARAH KRAKOFF, AMERICAN INDIAN LAW: CASES AND COMMENTARY 82 (2nd ed. 2010).

74. Kenneth H. Bobroff, *Retelling Allotment: Indian Property Rights and the Myth of Common Ownership*, 54 VAND. L. REV. 1559, 1567 (2001).

75. DAVID RICH LEWIS, NEITHER WOLF NOR DOG: AMERICAN INDIANS, ENVIRONMENT, AND AGRARIAN CHANGE 10-11 (1994).

purpose of farming, often accompanied by communal rights to grazing lands.[76]

The Federal government's policy of moving tribes onto reservations that constituted small portions of their traditional territories and encouraging them to undertake European-style farming on individual plots, turned out to be fairly unsuccessful, so Congress again exercised its "plenary power" and established the General Allotment Act of 1887 (also known as the Dawes Act) making the division and individual ownership of plots of reservation lands mandatory.[77] This policy resulted nationally in the loss of two-thirds of the tribal land base, as "surplus" lands were opened to settlement by non-Indians and non-Indian purchasers bought up land from Indian allottees.[78] "The lands were not, of course, surplus. The formula used—160 acres for the head of the family, eighty acres for older children and wives, and forty acres for minor children, did not look even five years down the road to the future of the tribe."[79] Rather than encouraging Indian peoples to farm, the shift from communal landholdings to individual allotments disrupted traditional tribal farming methods, and led to a decrease in agriculture on reservation lands.[80] Further challenges are presented by the "fractionation" of lands that occurred as subsequent generations inherit smaller and smaller percentages of the individual allotments, making agricultural management or any other use of these plots next to impossible.[81]

The Indian Reorganization Act of 1934 officially terminated allotment, increased Indian presence in the Department of Indian Services, restored some Indian lands, and facilitated the adoption of Euro-American-styled governmental systems on reservations.[82] Despite encouraging some measures of self-determination, however, U.S. policy generally continued to

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76. Bobroff, *supra* note 74, at 1586-1589.

77. ANDERSON ET AL., *supra* note 73, at 106.

78. *Id.* at 109.

79. Vine Deloria, Jr., *Reserving to Themselves: Treaties and the Powers of Indian Tribes*, 38 ARIZ. L. REV. 963, 978 (1996).

80. ANDERSON ET AL., *supra* note 73, at 111.

81. *See* Stacy L. Leeds, *By Eminent Domain or Some Other Name: A Tribal Perspective on Taking Land*, 41 TULSA L. REV. 51, 68 (2005) ("The allotment process that was premised on maximizing the efficiency of Indian land use has rendered most Indian land useless. There are multiple examples that illustrate the problem of fractionated ownership in Indian country, but the most famous description follows: 'Tract 1305 is 40 acres and produces $1,080 in income annually. It is valued at $8,000. It has 439 owners, one-third of whom receive less than $.05 in annual rent and two-thirds of whom receive less than $1 . . . The common denominator used to compute fractional interests in the property is 3,394,923,840,000. The smallest heir receives $.01 every 177 years . . . The administrative costs of handling this tract are estimated by the Bureau of Indian Affairs at $17,560 annually.'" (citing Hodel v. Irving, 481 U.S. 704, 713 (1987)).

82. ANDERSON ET AL., *supra* note 73, at 132-33.

favor assimilation of tribal members into mainstream American society.[83] In 1953, Congress passed House Resolution 108, calling for the immediate termination of federal recognition of and aid to certain tribes, and the preparation of a list by the Secretary of the Interior of other tribes "ready for termination."[84] Terminations, which immediately removed tribal lands from trust status, led to the further erosion of tribal land bases.[85] Although the termination policy ended with the Nixon Administration in 1970,[86] the scars left by the enormous loss of tribal land and resulting fundamental changes to tribal life and social structures undoubtedly challenged traditional relationships to land and food.

B. The Effects of Assimilationist Policies on the Tribes of the American Southwest

The fate of tribes West of the Mississippi River differed somewhat from tribes on the East Coast.[87] This is because the United States acquired western territories later and from different colonial powers, and most western tribes were eventually confined to reservations that represented at least some part of their traditional territories.[88]

The Spanish established a handful of small settlements in what is now the Southwestern United States, during which time they recognized the land rights of the Pueblo peoples living in the area, and granted fee title to the land on which individual groups were residing and farming.[89] When Mexico gained its independence from Spain in 1821, it continued to recognize the rights of Pueblos to their land grants.[90] When Mexico ceded title to what is now California, Arizona, and New Mexico to the United States in the 1848 Treaty of Guadalupe Hidalgo, the U.S. government guaranteed all land grants by the former territorial sovereigns.[91] In 1913, the U.S. Supreme Court

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83. *Id.*

84. *Id.* at 144.

85. *See id.*

86. CHARLES WILKINSON, BLOOD STRUGGLE: THE RISE OF MODERN INDIAN NATIONS 196 (2005).

87. JAKE PAGE, IN THE HANDS OF THE GREAT SPIRIT: THE 20,000-YEAR HISTORY OF AMERICAN INDIANS 306-07 (2003).

88. *Id.*

89. *Land Grants*, ALBUQUERQUE HIST. SOC'Y (2008), http://www.albuqhistsoc.org/SecondSite/pkfiles/pk208landgrants.htm.

90. *See generally* JAMES A. VLASICH, PUEBLO AMERICAN AGRICULTURE 71-73 (2005).

91. *See* Treaty of Peace, Friendship, Limits, and Settlement (Treaty of Guadalupe Hidalgo), U.S.-Mex., arts. VIII, IX, Feb. 2, 1848, 9 Stat. 922.

held that the Pueblos were, in fact, "Indian Country" and therefore part of the U.S. reservation system.[92]

Other tribal groups in the Southwest were granted traditional reservations, either by treaty or by executive order.[93] The Navajo now occupy the largest Indian reservation in the United States, which was relatively untouched by the allotment policy.[94] As a result of contact with Spanish livestock practices, the Navajo, who were practicing agriculture before European arrival on the continent,[95] adopted sheepherding during the 16th Century.[96] In 1864 the Navajos were forced off their traditional lands, or Dinétah, on the "long walk" to a reservation in eastern New Mexico, where U.S. officials unsuccessfully attempted to force them to engage in Euro-American style agriculture.[97] In 1868, the government relented and the Navajo people were allowed to return to Dinétah and sheepherding, as well as other forms of traditional agriculture, were reestablished.[98] Livestock herding was also adopted by several other tribes in the Southwest and continues today, although tribal methods have sometimes been at odds with federal policies and management practices.[99] Traditional farming methods continued on other reservations in the region as well despite the pressures of reduced land bases and assimilationist policies.[100]

One advantage Southwestern tribes had over tribes in less arid regions was that their territories were less desirable to American settlers and thus attracted fewer homesteaders, leaving tribal peoples relatively unaffected by policies such as allotment.[101] Southwestern tribal peoples did not entirely

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92. United States v. Sandoval, 231 U.S. 28 (1913).

93. *See generally FAQs,* INDIAN AFFAIRS, http://www.bia.gov/FAQs (last updated Apr. 10, 2015) (providing information as to the creation of reservations).

94. For a description of the Navajo reservation, *see* DAVID E. WILKINS, THE NAVAJO POLITICAL EXPERIENCE xxiii (2003).

95. *Navajo (Diné),* LAND USE HIST. OF N. AM., http://cpluhna.nau.edu/People/navajo.htm#TheModernPeriod (last visited Mar. 9, 2015).

96. *The History and Near Extinction of the Churro,* NAVAJO SHEEP PROJECT, http://navajosheepproject.com/churrohistory.html (last visited May 14, 2014).

97. *See* WILKINS, *supra* note 94, at 78-79, 207.

98. *Navajo (Diné),supra* note 95.

99. *See* David R. Lewis, *Native Americans and the Environment: A Survey of Twentieth Century Issues* 19 AM. INDIAN Q. 423, 425-26 (1995).

100. See section V below for a more in-depth discussion of the survival of traditional agricultural practices.

101. "By the early twentieth century, the little land Native Americans controlled was mostly in the trans-Mississippi West. They maintained a land base and a cultural identity, things that continue to set them apart, economically as well as socially and politically from other ethnic groups or classes in the United States. Although viewed as relatively valueless by nineteenth-century white standards, these lands were places of spiritual value and some contained resources of immense worth. This fact informs nearly all

escape pressures to take on Euro-American government, education, and economic systems, however, and tribes of the American Southwest suffered fundamental shifts in their relationships to land, food, and identity as a result.[102]

IV. MODERN DIETS AND CHRONIC DISEASE

Direct impacts of European contact on American Indian health began with the spread of devastating epidemic diseases, resulting in high mortality rates amongst Native peoples,[103] exacerbated by forced crowding on reservations.[104] This massive loss of population base disrupted cultures, and made European and American occupation of traditional American Indian homelands easier.[105]

In the mid-19th century, the United States government began to establish Indian Reservations in the American Southwest, alongside the Pueblos recognized earlier by the Spanish.[106] Particularly for the less traditionally agricultural tribes, reservation life brought major changes in diet through government food distribution programs.[107] Agricultural tribes were also negatively affected by the loss of much of their traditional land bases, the restriction of supplementary hunting and gathering practices, and the continuing replacement of traditional foods by government-provided commodities.[108] "Diets historically high in complex carbohydrate/high fiber foods and lower in fat were replaced by foods high in refined carbohydrates (e.g. refined sugars), fat, sodium, and low in fruits and vegetables."[109]

In the first part of the 20th century there was widespread hunger on American Indian Reservations, a crisis the federal government has now significantly reduced through food aid.[110] Currently, the United States

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Native American environmental issues in the twentieth century. Land (its loss, location, and resource wealth or poverty), exploitation of land, and changing Indian needs, attitudes, and religious demands define the issues facing modern Indians and their environments." Lewis, *supra* note 99, at 424.

102. *See* WILKINSON, *supra* note 86, at 259-61.

103. Ann F. Ramenofsky et al., *Native American Disease History: Past, Present and Future Directions*, 35 WORLD ARCHAEOLOGY (ARCHAEOLOGY OF EPIDEMIC AND INFECTIONS DISEASE) 241, 241-42 (2003).

104. Lewis, *supra* note 99, at 437.

105. *Id.*

106. *See id.* (discussing the implementation of reservations in the nineteenth-century).

107. "High-fiber, nutrient dense pre-European contact foods have been replaced by commercially produced low-fiber, high-fat, high-sugar foods and beverages, many provided by various feeding programs." COMPANION, *supra* note 11, at 12.

108. *See id.* at 12-13.

109. U.S. DEP'T OF HEALTH & HUMAN SERVS., *supra* note 10, at x.

110. COMPANION, *supra* note 11, at 15

government provides food aid to American Indian reservations through several programs, which include: Special Supplemental Food Program for Women, Infants and Children; Food Distribution Program on American Indian Reservations; Food Stamp Program; Commodity Supplemental Food Program; Nutrition Services Incentive Program; National School Lunch and Breakfast Programs; Child and Adult Care Food Program; Special Milk Program; and Summer Food Service Program.[111] Studies have found that these food aid programs are the only source of food for large percentages of the participating households on American Indian reservations.[112]

The government is recognizing that the poor nutritional quality of standard commodity food products has detrimental health effects on the American Indian populations that rely so heavily on them, and thus has begun to address this new health crisis by improving the nutritional quality of foods provided through the programs.[113] Despite these efforts, the incidence of chronic disease, particularly diabetes, affects American Indians at the level of an epidemic.[114]

Obesity, a major risk factor for Type 2 diabetes,[115] occurs at high rates among Southwestern American Indians.[116] In most of the studies on the prevalence of obesity, rates are higher in American Indian populations than the combined U.S. rates for all races.[117] Obesity is correlated in American Indian populations (as in other ethnic groups) with poor nutrition, low levels of physical activity, and, likely, genetic tendencies to store body fat.[118]

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111. U.S. DEP'T OF HEALTH & HUMAN SERVS., *supra* note 10, at 19-21.

112. *Id.* at 22.

113. *See* KENNETH FINEGOLD ET AL., USDA CONTRACTOR & COOPERATOR REPORT NO. 4, BACKGROUND REPORT ON THE USE AND IMPACT OF FOOD ASSISTANCE PROGRAMS ON INDIAN RESERVATIONS 9-10 (Jan. 2005); U.S. DEP'T OF HEALTH & HUMAN SERVS., *supra* note 10, at 22.

114. *See* CTRS. FOR DISEASE CONTROL & PREVENTION NAT'L DIABETES EDUC. PROGRAM, U.S. DEP'T OF HEALTH & HUMAN SERVS., THE DIABETES EPIDEMIC AMONG AMERICAN INDIANS AND ALASKA NATIVES, *available at* http://www.empirestatephtc.org/Resources/Res/clih/The-Diabetes-Epidemic-Among-American-Indians-and-Alaska-Natives.pdf (last updated Jan. 2011).

115. *Id.*

116. COMPANION, *supra* note 11, at 12.

117. U.S. DEP'T OF HEALTH & HUMAN SERVS., *supra* note 10, at 10-11

118. "Historically, in many Native populations, particularly tribes in the Southwest, the accumulation of body fat was valued. Body fat provides a buffer against food insecurity. Cultural memory of seasonal hunger places many tribal notions of appropriate body size in conflict with current Euro-American ideals of thinness and intentional food restriction. However, obesity has only become a major health concern in the ANIAN [American Indian and Alaska Native] population in the past one to two generations. It is the result of increased high-fat food availability through social programs and rapid changes from active to sedentary lifestyles. Diabetes among the

Obesity is a growing problem for both American Indian adults and children,[119] and the result is that American Indians are almost twice as likely to be diagnosed with diabetes, than any other race.[120]

The U.S. government has established several programs aimed at addressing this staggering statistic.[121] The Indian Health Service ("HIS"), the National Institutes of Health ("NIH"), and the Center for Disease Control and Prevention ("CDC") run several programs to collect data and engage in prevention on American Indian reservations, including the IHS Special Diabetes Program for Indians, NIH's Diabetes Prevention Program and National Diabetes Education Program, and CDC's Native Diabetes Wellness program.[122] It is well established that in order to be successful in working with American Indian populations, nutrition and diabetes prevention programs must be designed in a culturally appropriate manner, which, given the diversity in Indian Country, requires customization to each tribal community.[123] Ideally, such programs are designed and implemented by the tribal communities themselves. Tribal governments and organizations are much better suited than federal government agencies to design and implement culturally relevant and engaging programs to reduce obesity rates and prevent chronic diseases, through which traditional knowledge about food, land, and identity can be shared and strengthened.

V. MODERN AGRICULTURE AND TRADITION IN INDIAN COUNTRY: A RETURN TO ANCIENT FOODS?

This section will first address the modern practice of agriculture among Southwestern American Indian communities, both for profit and for personal use. Secondly, this section will discuss various initiatives by Southwestern American Indian tribes to revive traditional methods of agriculture among tribal members, with the goals of both addressing health issues and encouraging cultural revival. Finally, this section will discuss the survival of traditional agricultural practices amongst tribes of the Southwest. This

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Native American population was uncommon prior to World War II but **has recently grown at a rate 234 percent higher than for all other United States ethnic groups.**" COMPANION, *supra* note 12, at 12. *See also id.* at 13, 20; U.S. DEP'T OF HEALTH & HUMAN SERVS., *supra* note 10, at xi.

119. U.S. DEP'T OF HEALTH & HUMAN SERVS., *supra* note 10, at xi, 77.

120. CARA JAMES, KARYN SCHWARTZ AND JULIA BERNDT, A PROFILE OF AMERICAN INDIANS AND ALASKA NATIVES AND THEIR HEALTH COVERAGE 1 (Sept. 2009).

121. U.S. DEP'T OF HEALTH & HUMAN SERVS., *supra* note 10, at xiii-xv.

122. *Id.*

123. *See* FINEGOLD ET AL., *supra* note 113, at 22.

section will set the stage for the conclusion, which will address agriculture and the traditional foods movement as means to foster tribal sovereignty.

A. Modern Agriculture on Southwestern Indian Reservations

The largely unsuccessful policy of encouraging Euro-American-style agricultural pursuits on Indian reservations was particularly unproductive in the Southwest where Euro-American agricultural methods quickly over-taxed the arid landscape.[124] Much of the land used by American Indians for agricultural production in the Southwest was sold to non-Indians or left fallow after widespread crop failures during the early 20th century.[125] Although modern technology has allowed super-productive agriculture to resume in the Southwest, the sustainability of this method is questionable, while the use of modern chemical pesticides and fertilizers have damaged many precious Southwestern water sources.[126]

Some Southwestern tribes have successfully undertaken modern Euro-American agricultural practices. The Navajo Nation Tribal Council developed an agricultural program in 1970 called the Navajo Agricultural Products Industry ("NAPI").[127] The purpose of NAPI was to create a farm-training program that would increase tribal revenue and make use of tribal water rights.[128] NAPI is currently supported by the Bureau of Indian Affairs ("BIA") through the Indian Self-Determination Act of 1975,[129] and proclaims itself to be "a growing and thriving enterprise with national and international contracts for its agricultural products, sold under the brand name 'Navajo Pride.'"[130] NAPI is a modern agricultural operation that grows alfalfa, corn, pinto beans, potatoes, wheat, and other grains.[131]

In 1993, Congress passed the American Indian Agricultural Resources Management Act ("AIARMA"), the purpose of which is to "carry out the trust responsibility of the United States and promote the self-determination of Indian tribes."[132] Under AIARMA and the Indian Self-Determination Act,

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124. *See* Lewis, *supra* note 99, at 425.
125. *Id.*
126. *Id.*
127. Mondou, *supra* note 47, at 388.
128. HENRY W. KIPP, U.S. DEP'T OF THE INTERIOR, BUREAU OF INDIAN AFFAIRS, INDIANS IN AGRICULTURE: AN HISTORICAL SKETCH 59-60 (1988).
129. *See* 25 U.S.C. §§ 450f–450n (the purpose of this Act is to allow tribal entities to contract with the government to provide services previously implemented by the Bureau of Indian Affairs).
130. *Navajo Agricultural Products Industry, NAPI*, NAVAJO PRIDE, http://www.navajopride.com/NAPI.html (last visited May 14, 2014).
131. *Id.*
132. 25 U.S.C. § 3702.

the BIA's Bureau of Agriculture and Rangeland Development "provides support for tribal agricultural programs under tribal contracts and direct implementation, covering over 46 million acres of Indian land used for farming and grazing by livestock and game animals."[133] Although management responsibility of funded projects under AIARMA largely lies with the BIA, there seems to be consensus that the statute strengthens tribal control over the use and management of fractionated agricultural landholdings.[134]

Such modern agricultural pursuits provide needed tribal revenues and boost employment among chronically under-employed reservation residents, but arguably do little to address the health and nutrition crises facing reservation communities.[135] Questions about the sustainability of modern agricultural methods in such arid, fragile landscapes and the dangers presented by pesticides and fertilizers further challenge the value of these programs to the health and well-being of Southwestern American Indian communities. The traditional foods movement, detailed in the section below, has a very different goal. Although some traditional foods programs are being run as revenue-generating businesses, the overarching goal of most programs is to address the communities' needs for nutrition and cultural preservation and revival, as described in the following section.

B. The Traditional Foods Movement

> *On Thanksgiving Day in 1992 - during the five hundredth anniversary of Spanish arrival in the Americas - children from Prima and Maricopa tribal communities in Arizona shared a special feast. They did not eat foods shared between the Pilgrims and the Native Americans on the Eastern Seaboard. Instead, they ate what their ancestors had eaten before any European ever set his foot on the soil of the North American continent . . . There is hope that the*

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133. *Branch of Agriculture & Rangeland Development*, INDIAN AFFAIRS, http://www.bia.gov/WhoWeAre/BIA/OTS/NaturalResources/AgrRngeDev/index.htm (last visited May 14, 2014).

134. *See* Judith V. Royster, *Practical Sovereignty, Political Sovereignty, and the Indian Tribal Energy Development and Self Determination Act* 12 LEWIS AND CLARK L. REV. 1065, 1076, n. 65 (2008); *see also* Thomas H. Nelson, *Retrieving "Lost" Sovereignty: Trespass Actions in Indian Country,* 12 INDIAN L. NEWSL. 6, 10-11 (Aug. 2004), *available at* http://www.nwiba.org/pdfs/08_04%20Indian%20News.pdf.

135. *See, e.g.*, Annette Fuentes, *American Indian Unemployment: From Bad to Worse in Recession*, NEW AM. MEDIA (Dec. 10, 2009), *available at* http://www.blackradionetwork.com/american_indian_unemployment_from_bad_to_worse_in_recession.

> *Gila River Prima children may benefit directly from the seeds their ancestors safeguarded, through maintaining a diet rich in nutrition and high in fiber. Without such Native foods in their diet and without the kind of exercise that gardening can give them, these children may become as vulnerable to a nutrition-related disease as their parents have been.*[136]

One of the major challenges facing communities that hope to reverse trends of obesity and diabetes is to contend with addiction to high-fat, high-sugar foods such as fry bread,[137] which in many communities has come to be thought of as "traditionally native."[138] American Indian communities also face high rates of depression[139] and suicide,[140] as well as a sense of fatalism about the inevitability of diabetes.[141] Traditional foods, which often have deep cultural meaning, can be invaluable for addressing these challenges and serving as a tool to teach the new generation about culture and tradition.[142] Several programs were developed by tribes, tribal members, and through community partnerships in an effort to accomplish these goals.[143]

One such program is Native Seeds/SEARCH, a nonprofit organization based out of Tuscon, Arizona, which is a partnership between native and non-native food activists.[144] The program "conserves, distributes and documents the adapted and diverse varieties of agricultural seeds, their wild relatives and the role these seeds play in cultures of the American Southwest and northwest Mexico."[145] In addition to collecting and distributing seeds from native and traditional crops, Native Seeds/SEARCH has undertaken a project to engage in "cultural memory banking."[146] Anthropologist Virginia Nazarea coined this term, which "recognizes the intimate link existing

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136. Gary Paul Nabhan, *Forward* to CADUTO & BRUCHAC, *supra* note 45, at xi.

137. A sweet, thick fried dough. "Fry bread was developed as a means of stretching [military] rations [white flour, baking powder, salt pork, bacon, potatoes, beans, coffee, sugar, tea, and lard] into a palatable meal." COMPANION, *supra* note 11, at 12-13

138. Daisy Hernandez, *Got tradition?*, COLORLINES (July 21, 2005, 12:00 PM), http://colorlines.com/archives/2005/07/got_tradition.html.

139. *See* U.S. DEP'T OF HEALTH & HUMAN SERVS., *supra* note 10, at xi.

140. *See id.*

141. *See* Hernandez, *supra* note 138.

142. *See* U.S. DEP'T OF HEALTH & HUMAN SERVS., *supra* note 10, at 17-18.

143. *See generally About Us*, NATIVE SEEDS/SEARCH, http://shop.nativeseeds.org/pages/about-us (last visited Mar. 9, 2015) (providing an example of such a program).

144. *See Id.*

145. *Id.*

146. *Past Projects: Cultural Memory Bank*, NATIVE SEEDS/SEARCH, http://nativeseeds.org/component/content/article?id=15 (last visited Apr. 12, 2015).

between human cultures and their crops."[147] In an effort to preserve this quickly dying knowledge amongst Southwestern and Mexican native famers, Native Seeds/SEARCH is developing a database of information based on interviews with farmers from across the Southwest and Mexico.[148] Native Seeds/SEARCH has additionally produced a CD-ROM called "Agricultural Traditions of the Diné,"[149] which is available at schools and libraries serving Navajo Youth.[150]

Another such program is a grassroots organization on the Tohono O'odham[151] reservation in Arizona, where more than 50 percent of the adults have diabetes, called Tohono O'odham Community Action ("TOCA").[152] TOCA is a community-based organization "dedicated to creating a healthy, culturally-vital and sustainable community on the Tohono O'odham Nation."[153] TOCA heads and collaborates in numerous education and wellness programs, including: the Tohono O'odham Farm and Food Working Group; A New Generation of O'odham Farmers Training Program; and school gardens, nutrition and culture classes, and traditional foods in cafeterias through the Tohono O'odham Food and Fitness Collaboration.[154] Terrol Dew Johnson, founder of TOCA, is particularly enthusiastic about tepary beans, which not only help to lower blood glucose, but also represent a deep cultural connection to land and food:

> "You're not just seeing these beans . . . You're seeing the whole culture. That bean holds our language, our songs, our history" . . . Young Indians, as well as older ones, have been alienated from their own culture, Johnson says, and he thinks these foods can reintroduce them to the traditions. After all, these foods are used in ceremonies and carry the stories of the Desert People. For example, it is said that when Coyote was running with a bag of

147. *Id.*
148. *Id.*
149. Diné is the Navajo word for the Navajo people. NAVAJO PEOPLE, http://navajopeople.org/ (last visited Mar. 11, 2015).
150. *Past Projects: Cultural Memory Bank*, *supra* note 146.
151. Formerly the Papago Tribe. *Tohono O'odham History*, TOHONO O'ODHAM NATION, http://www.tonation-nsn.gov/ton_history.aspx (last visited Mar. 11, 2015).
152. Hernandez, *supra* note 138.
153. TOCA: TOHONO O'ODHAM COMMUNITY ACTION, http://www.tocaonline.org (last visited May 14, 2014).
154. *See id.*

> tepary beans, he tripped and the white beans flew into the sky, creating the Milky Way.[155]

TOCA is particularly proud of its "New Generation" of farmers, some of whom have participated in TOCA's one-year farming apprenticeship training program and summer youth agricultural internships.[156] The summer interns established their own agricultural program called "Project Oidag," with the goal of starting a business.[157]

Native Seeds/SEARCH and TOCA are just two examples of American Indian organizations working to preserve traditional agricultural knowledge. Like other traditional, food-focused organizations, Native Seeds/SEARCH and TOCA are addressing the loss of cultural knowledge by targeting American Indian youth.[158] "Several studies have argued that this [food sovereignty] increases the transmission of cultural knowledge, the revitalization of cultural practices such as songs and ceremonies, reaffirms a positive collective identity . . . and helps to establish and reinvigorate social ties."[159] Thus through their work, Native Seeds/SEARCH, TOCA, and other similar organizations are taking steps to address the physical and cultural health of American Indian peoples, providing a means of strengthening tribal sovereignty.

C. The Unnoticed Survival of Traditional Food Practices in the Southwest

Although American Indian leaders in the traditional foods movement probably lament the loss of traditional agricultural and food preparation practices by the majority of tribal members, particularly the young, some traditions seem to have continued to survive on the isolated reservations of the American Southwest. As discussed above, this arid, sparsely populated region was spared some of the more disruptive land-acquisition policies, and Indian peoples were able to continue to engage in many traditional practices with less interference by the BIA.[160] The survival of these traditional

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155. *Id.*

156. *New Generation of O'odham Farmers: Food System Leadership in Action*, TOCA: TOHONO O'ODHAM COMMUNITY ACTION, http://tocaonline.org/new-generation-of-o-odham-farmers.html (last visited Apr. 12, 2015).

157. *Project Oidag: Youth Gardeners, Mentors*, TOCA: TOHONO O'ODHAM COMMUNITY ACTION, http://www.tocaonline.org/project-oidag.html (last visited May 14, 2014).

158. *See Past Projects: Cultural Memory Bank, supra* note 146; *New Generation of O'odham Farmers: Food System Leadership in Action, supra* note 156.

159. COMPANION, *supra* note 11, at 27.

160. See section III(B)..

practices serves as a foundation for the traditional foods movement, and is a testament to the strength of sovereignty and culture within tribal nations.

The Hopi is one tribe that has maintained a strong hold on traditional farming practices in the Southwest.[161] Masters of dry farming corn in the high deserts of Black Mesa, the Hopi continue to honor the corn, the land, and the rain with annual ceremonies such as Home Dance.[162] This ceremony had been performed since time immemorial, and the tradition, an expression of the Hopi reverence for and connection to their homelands and the food it provides, lives on.[163]

Although the Navajo Nation is engaged in large-scale, Euro-American-style agricultural pursuits, traditional farming practices continue as well.[164] Organizations like Navajo Nation Traditional Agricultural Outreach and DINÉ , Inc.,[165] Tsé Chizhí community garden and seed exchange program in Rough Rock, Arizona,[166] and Native Seeds/SEARCH, honor and keep these traditions alive, while individuals also work to retain traditional family farms.[167]

Many Pueblos have also been able to keep their farming traditions alive.[168] Academic interest by organizations like the Crow Canyon Archaeological Center in Cortez, Colorado, have begun to document traditional Pueblo farming knowledge still in use today.[169] On Cochiti Pueblo in New Mexico, despite disruption by a nearby dam, the people maintain traditional cultural and agricultural practices alongside modern ones.[170] As the Cochiti Pueblo declares on its website:

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161. *Hopi Indian Facts*, NATIVE AMERICAN INDIAN FACTS, http://native-american-indian-facts.com/Southwest-American-Indian-Facts/Hopi-Indian-Facts.shtml (last visited Apr. 12, 2015).

162. For a first-hand description of Home Dance, *see* CHARLES WILKINSON, FIRE ON THE PLATEAU 295-313 (1999).

163. *Id.*

164. *See* NAVAJO NATION TRADITIONAL AGRICULTURAL OUTREACH PROGRAM, http://www.start2farm.gov/programs/nntao-navajo-nation-traditional-agricultural-outreach-program (last visited Mar. 11, 2015).

165. *Id.*

166. Anne Minard, *Mother Earth Gathering on the Navajo Nation Honors Preservation of Traditional Agriculture*, INDIAN COUNTRY TODAY (May 9, 2012), http://indiancountrytodaymedianetwork.com/2012/05/09/mother-earth-gathering-navajo-nation-honors-preservation-traditional-agriculture-112068.

167. TANYA DENKLA COBB, RECLAIMING OUR FOOD: HOW THE GRASSROOTS MOVEMENT IS CHANGING THE WAY WE EAT 186 (2011).

168. *See Pueblo Farming Project*, CROW CANYON ARCHAEOLOGICAL CTR., http://www.crowcanyon.org/index.php/pueblo-farming-project (last visited Mar. 9, 2015) (illustrating that the farming traditions are in fact still alive).

169. *Id.*

170. PUEBLO DE COCHITI, http://www.pueblodecochiti.org/ (last visited May 14, 2014).

> Of primary importance to the Pueblo de Cochiti are the land, air and water on and adjacent to the reservation, which is the lifeline of the Pueblo Traditions and Culture. The Pueblo is located in the heart of the traditional homeland and it would be impossible to retain peoples and culture if the environment is impacted to the point where the Cochiti decide the land is dangerous to utilize for habitat, farming, fishing, hunting, and maintaining Cultural Tradition.[171]

The Cochiti have recognized, as have many tribes, the vital importance of holding on to cultural traditions in the quest to maintain their tribal identity.[172] Like the modern traditional foods movement, the acknowledgment and valuing of the informal survival of traditional agricultural practices strengthens tribal sovereignty and self-determination.

VI. CONCLUSION: FOOD AND SOVEREIGNTY

The major work of modern American Indian nations is a quest for self-determination and sovereignty. For American Indians, the concept of sovereignty is unique to their status as "domestic dependent nations."[173] Tribes have worked hard in modern times to secure the right to self-determination in the wake of allotment and tribal terminations that tore American Indian communities apart during the 19th and much of the 20th centuries. Tribal members, as part of the civil rights movement, began advocating for self-determination in the 1960s, and in 1970 President Richard Nixon made tribal self-determination official federal policy in a congressional address.[174] Through this new acknowledgement of tribal rights to shape and implement programs and policies on their own reservations, American Indian tribes have increasingly been able to engage as sovereign entities in the realm of national policy.[175] The practice of tribal

171. *Id.*
172. *Id.*
173. Established by the Supreme Court of the United States as the status of American Indian nations in relation to the Federal and state governments in *Johnson v. M'Intosh*, 21 U.S. 543 (1823).
174. WILKINSON, *supra* note 86, at 196.
175. *Id.* at 191-98.

sovereignty additionally facilitates cultural sensitivity and revival by healing some historical trauma. As researcher Michèle Companion posits:

> The health of a people is vital for the long-term survival of them and their cultures. Consequently, health and health care issues are central components in sovereignty and self-determination of all indigenous peoples . . . One direct method of empowerment is to link nutrition and food choices to food sovereignty.[176]

Food sovereignty was a concept introduced by La Vía Campesina[177] at the 1996 World Food Summit as a challenge to international "notions of food security, which, almost studiously, avoided discussing the social control of the food system."[178] Instead, global hunger was addressed by entities such as the World Trade Organization, which encourages "agricultural trade liberalization" by fostering large-scale food production.[179] This policy decreases food prices, but "dumping" cheaper food in international markets has devastated small-scale local farming and in-country food production.[180] Although the origins of food sovereignty lie in a concern about the food security of nations, indigenous communities world-wide have begun to adopt the concept as one that fits their own struggles with food security, autonomy, self-determination, and the exercise of sovereignty.[181] This concept has also begun to take hold in Indian Country in the United States:

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176. COMPANION, *supra* note 11, at 4, 27.

177. "La Via Campesina is the international movement which brings together millions of peasants, small and medium-size farmers, landless people, women farmers, indigenous people, migrants and agricultural workers from around the world. It defends small-scale sustainable agriculture as a way to promote social justice and dignity. It strongly opposes corporate driven agriculture and transnational companies that are destroying people and nature." *What is La Via Campesina?*, THE INTERNATIONAL PEASANT'S VOICE, http://viacampesina.org/en/index.php/organisation-mainmenu-44/what-is-la-via-campesina-mainmenu-45 (last visited May 14, 2014).

178. Raj Patel, *What Does Food Sovereignty Look Like?*, *in* FOOD SOVEREIGNTY: RECONNECTING FOOD, NATURE AND COMMUNITY 186, 188 (Hannah Wittman et al., eds., 2010).

179. Hannah Wittman, Annette Aurélie Desmarais & Nettie Weibe, *The Origins and Potential of Food Sovereignty*, *in* FOOD SOVEREIGNTY: RECONNECTING FOOD, NATURE AND COMMUNITY 3 (Hannah Wittman et al., eds., 2010).

180. *Id.*

181. *See, e.g.*, Turner & Turner, *supra* note 12; Kerin Gould, DEEP FOOD AUTONOMY (2004).

American Indians are involved in the movement for food sovereignty at local and national levels, maintaining that it is a prerequisite for food security ([International Indian Treaty Council], 2003). Numerous examples exist across Indian Country showing tribes' involvement in strengthening, protecting, or restoring traditional food practices . . . Many Native people consider the restoration of traditional subsistence foods and practices essential to regain their health, traditional economy, and culture for generations to come.[182]

In the American Southwest several tribes are already engaging in the project of fostering food sovereignty through programs developed under the Indian Self-Determination Act and through their own tribal revenues. The successes achieved through these means should serve as models for more programs like TOCA, which promotes food sovereignty and thus brings together solutions for addressing nutrition and health, cultural revival, and the strengthening of sovereignty on Tohono O'odham. Traditional foods and agricultural practices must be honored as the tribal nations of the Southwest move forward in their quest to strengthen their own sovereignty and protect the spiritual and physical health of their members.

182. Kibbe M. Conti, *Diabetes Prevention in Indian Country: Developing Nutrition Models to Tell the Story of Food-System Change*, 17 J. OF TRANSCULTURAL NURSING 234, 235 (2006).